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ABSTRACT

This instrument is a revision of the Texas Preschool Screening Inventory (TPSI). It is a screening test designed to identify children who may be at risk for learning problems as they enter kindergarten or first grade. The manual describes the directions for administration, scoring, rationale, and reference for each component of the instrument. The components include Auditory Memory for Numbers and Letters; Visual Memory for Objects; Auditory Sequencing; Articulation; Sound Discrimination; Rotations and Reversals of Letters and Numbers; and Following Instructions and Understanding Prepositions. The manual and complete instrument are included in this document. (DWH)

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TEXAS PRESCHOOL SCREENING INVENTORY (TPSI) MANUAL

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Introduction

The Texas Preschool Screening Inventory (TPSI) is a sceening test to help determine which youngsters might be at risk for learning problems as they enter Kindergarten or first grade. This instrument is not meant as a definitive test of a child's abilities and should not be interpreted as such to parents.

> "The concept of screening and evaluation are separate issues. Screening is a process whereby the child's performance is judged against a set standard or expectation for chronological age or other factor. FAILURE OF A SCREENING EXAM ONLY INDICATES A NEED FOR EVALUATION, IT DOES NOT IDENTIFY THE CHILD AS BEING HANDICAPPED. HOWEVER, THE CHILD WHO FAILS A SCREENING EXAM SHOULD BE IDENTIFIED TO THE EDUCATIONAL AGENCY (LOCAL PUBLIC SCHOOL) AS A CHILD IN NEED OF A FULL EVALUATION."
>
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>
> Page 22-23, Task Force on Public Law 94-142, Americn Academy of Pediatrics, April, 1981.

Components

1. Auditory Memory for Numbers and Letters

   Procedure: Say...listen, say the numbers I say but wait until I stop talking. Say 1-5. Good. Now say...

   342
   698
   175
   7-2-8-1-
   2-1-6-4-
   6-5-9-8-
   2-1-5-7-6-
   5-3-1-0-2-
   7-2-6-8-5-

   Score: A four year old should be able to repeat 2 sequences of 3 digits. A five year old should be able to repeat 2 sequences of 4 digits. A six year old should be able to repeat 2 sequences of 5 digits.

   Rationale: The ability to listen actively is an important part of communication. To gain competence in listening skills and to be able to reproduce verbal symbols, the child must be able to attend to auditory stimuli and to remember them long enough to imitate them. When memory span is delayed in maturing, speech development and various aspects of academic development may be delayed.

   Reference: Gesell (1940), Zimmerman, Terman and Merrill (1937), McCarthy (1972).

2. Visual Memory for Objects

Procedure: Present four, five and then six ojects in sequence in front of the child. (Any series of small toys may be utilized). Permit the child to observe the sequence for fifteen seconds then scramble and instruct the child: "Line them up exactly in the same way that you saw them." When first beginning, instruct, "I shall place some toys in front of you in a certain order. I shall let you look at them for a while and then mix them up. I want you to put them exactly in the same order that you saw them."

Toys and order:

(1) block, key, coin, pencil
(2) key, car, coin, pencil, block
(3) ring, coin, key, pencil, car, block

Score: A four year old should be able to do the sequence of four. A five year old should be able to reproduce the sequence of five. A six year old should be able to reproduce all the above. In rural primarily agarian populations of less than 10,000 people use 3 objects at age 4, 4 objects and age 5, and 5 objects at age 6.

Rationale: The child must be able to attend to visual stimuli and remember them long enough to imitate them. When visual memory is delayed in maturing various areas of academic development may be delayed.

Reference: Gesell (1940), Zimmerman, Terman and Merrill (1937), McCarthy (1972).

3. Auditory Sequencing (Syntax)

Procedure: The child is instructed to repeat each sentence individually. Say, "Repeat these sentences exactly as I say them, but wait until I stop talking:

Listen! I like to eat red apples.
Listen! Tommy went to the store to get food for his cat.
Listen! Mrs. Jones asked John to bring home some bread and butter."

Score: A four year old should get the first sentence correct. A one or two word misplacement in the second sentence is acceptable at the 5 year old level. A six year old should get all three sentences correct.

In rural primarily agarian populations of less than 10,000 people use the following sentences (rural norms):

Listen! I like to eat apples. (age 4)
Listen! Tommy went to the store to get milk. (age 5)
Listen! In the afternoon we come home from school at three. (age 6)

Note: If a child's intelligibility of the words is poor or if you are unable to understand him/her do the articulation portion of the test. Otherwise delete it.

Rationale: Sentence imitation is one way of assessing linguistic competency of children. It has been found to help differentiate among other things the language disordered and normal children, the learning disabled and academically achieving.

Reference: Wiig and Semel (1980), Menyuk & Looney (1972), Told, Newcombe (1967), Rosenthal (1970), Wiig and Roach (1975).

4. Articulation

Procedure: The child is told to repeat the following words. If a child is shy or unresponsive you may show him/her the appropiate picture.

K - Kite	J - Jar	CH - Church
G - Goat	TH - Thumb	SH - Shoes
R - Rabbit	S - Socks	
L - Leaf	Z - Zoo	

Score: Norms for sounds are listed below. This subtest should not be used in scoring for high risk if it is the only subtest failed. If a child fails this subtest a DASE (Denver Articulation Screening Exam) or other articulation measure should be used to determine his/her level and for confirmation of a possible problem.

Table I

Age at which selected consonants are usually produced correctly by children.

Age (in years)	Consonants
3	p, m, n, h, w
3.5	b
4	d, g, k, r
5	t, s, sh, ch, l, v
6	th (unvoiced), z
7	th (voiced), s & r blends (sm, gr, and so forth)

Rationale: Comparing sound production with the age change can determine articulation errors at a given age. Articulation errors occur 3 times more frequently in children with reading disabilities.

Reference: Helmick (1977), Lowe (1973).

5. Sound Discrimination

Procedure: The child is presented with a series of similar sounding words and asked to differentiate those which sound the same and those which do not sound the same. Before administration, teach the child the concept of same by saying "Listen, I'm going to say two words: girl-girl, and they are the same words. (One may point to the appropriate comparison.) They are the same, aren't they? Now if I say chair-wear these are not the same words. We sit in a chair, and we wear clothes. Even though they rhyme they are not the same word. Now are the words block and rock the same or not the same?" If the child answers correctly proceed. If the child has difficulty with the concept same, substitute the word "different" for "not the same."

share - chair	same	not the same
weed - read	same	not the same
sell - shell	same	not the same
two - two	same	not the same
sick - thick	same	not the same
son - son	same	not the same
mouse - mouth	same	not the same
pat - fat	same	not the same

Score: Two misses are normal at age 4. One miss out of the entire series is considered normal at age 5 and 6.

Rationale: The rate at which auditory language can be processed decreases when inaccurate discrimination has to be compensated for by cognitive-semantic processing and conceptualization. Accurate discrimination normally assist linguistic and semantic processing of language and facilitates analysis and synthesis at various levels. Since conceptualization may be limited in some learning disabled children, it seems prudent to evaluate discrimination as part of the evaluation of the potentially learning or language disabled child.

Reference: Wiig and Semel (1975), Told, Johnson and Mykleburst (1964-67).

6. Rotations and Reversals of Letters and Numbers

Procedure: The child is instructed...Please print the following words in lower case (little) not capital letters when I say the words...

boy, girl, moon, no, good, saw, bad, pop

Please write the following numbers...

16, 85, 92, 37, 45

If a child cannot spell he/she is asked to similarly print...

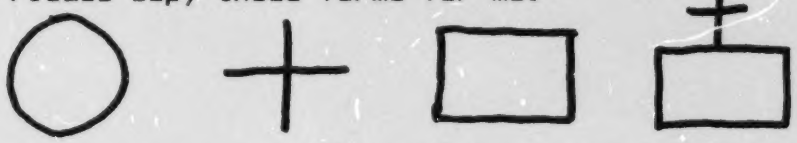
b, g, m, n, o, d, p

If they do not understand dual numbers the numbers one through ten may be presented separately. This section of the TPSI should only be used after a child has completed Kindergarten or is partially through the first grade.

Score: Children in Kindergarten can normally rotate and reverse these words. By the end of Kindergarten two reversals are acceptable. By the middle of first grade there should be none and this could be considered to possibly indicate some problems if other portions of the test indicate potential deficits.

Procedure: In children 4 years of age or those who have not completed Kindergarten, utilize the following:

"Please copy these forms for me."



Score: Criteria: Circle--pass any form resembling a circle. Fail continuous round motion. Plus--pass any crossing lines. Square--pass a closed figure having at least three angles that are near 90 degrees.

4 year old should copy one of four
5 year old should copy two of four
6 year old should copy three of four

Rationale: The necessity of seeing symbols in their proper perspective and form in order for the child to make academic progress is obvious. Not doing so can interfere with his abilities to achieve in reading, writing, spelling, and math. Children with problems with visual perception fre-

quently have these problems. "Minor differences along non-salient perceptual dimensions, such as the orientation of a letter or the relative positions of two letters in a sequence may yield completely different meanings." (b, d; on, no)

Reference: Kinsbourne and Caplan (1979)

7. Following Instructions and Understanding Prepositions

Procedure: (1) The child is told to give the block to me and then sit down (or stand up).
(2) Walk to the door, touch your nose and then sit down.
(3) Hand child a second block and tell him/her to put it on top of the table and then under the table.

Score: A four year old should be able to follow a two stage instruction (1). A five and six year old should be able to follow a three stage instruction (2). All age groups should understand the prepositions "under" and "on top of."

Rationale: In order to learn, a child must first be able to understand the directions given him/her by a teacher. Without this skill, incomplete and incorrect learning can frequently occur.

Note: Any of the subtests should be stopped when a child reaches his/her age equivalent.

Score: While individual physicians may wish to exercise their own judgment when a child scores below age on one subtest, it is recommended that scoring below age level on two or more subtests is highly suspicious for language and learning problems. Such children should be referred to their local school for further testing.

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Texas Preschool Screening Inventory

(Children tested in Physicians Offices)

Total Subjects.....428
male.....244
female.....184

Income:
0 to 19,000.....131
20,000 to 39,000.....190
over 40,000..... 49
Income unknown..... 68

Age:
4.....140
5.....186
6.....102

Ethnic:
cauc.....371
black..... 36
mex.am..... 12
asian..... 9

Pass.....365
0 miss.....295
1 miss..... 70

High Risk.....63(Two misses or more)
no following..... 6
false positive.....10
placed in sp. ed.....43
behavior problems..... 4(without learning disability)

High Risk Ages:
4.....15(One false positive)
5.....16(Two false positive)
6.....32(Six false positive)

High Risk Income:
0 to 19,000.....30
20,000 to 39,000.....24
over 40,000..... 9

High Risk Ethnic:
cauc.....60
black..... 3
(one false negative)

Validation Sample

Subjects were 81 children with educationally diagnosed learning or language disabilities.

Male.....53
female.....28

ethnic
cauc.....52
black.....23
mex.am..... 6

age
4.....23
5.....21
6.....37

number of items failed
0..... 0
1..... 3
2.....17
3.....37
4.....20
over four..... 4

Head Start Sample

Total Subjects.....99
Male.....55
Female.....44
Age
4.....78
5.....21
Ethnic
Black.....81
Cauc.....15
Mexican Am..... 3
Pass.....72
High Risk.....27
Failed Hannah Gardner.....21
Hannah Gardner Pending.... 4
High Risk Black.....22
High Risk Cauc..... 5
High Risk Male.....18
High Risk Female..... 9

Texas Preschool Screening Inventory
(Worksheet)

Child's Name_____DOB_____CA_____Date_____
Sex_____Ethnic Origin_____School or Center_____
Examiner_____Location of testing_____

Materials needed: 2 blocks, key, coin, pencil, car, ring, pencil, paper.
Failure criteria: The child is considered to be at risk for academic problem if two or more subtests are failed. Administer subtests only up to the child's age level and not beyond.

1. Auditory Memory

Examiner: "Listen, say the numbers I say, but wait until I stop talking. Say 1-5. Good. Now say..."

3-4-2_____	7-2-8-1_____	2-1-5-7-6_____
6-9-8_____	2-1-6-4_____	5-3-1-0-2_____
1-7-5_____	6-5-9-8_____	7-2-6-8-5_____

4 year:	2 sequences of 3 digits	Pass_____Fail_____
5 year:	2 sequences of 4 digits	Pass_____Fail_____
6 year:	2 sequences of 5 digits	Pass_____Fail_____

2. Visual Memory

Examiner: "I'm going to put some toys in a certain order. I'll let you look at them for awhile and then mix them up. I want you to put them in the same order that you saw them."

4 year:	block, key, coin, pencil	Pass_____Fail_____
5 year:	key, car, coin, pencil, block	Pass_____Fail_____
6 year:	ring, coin, key, pencil, car, block	Pass_____Fail_____

3. Auditory Sequencing

Examiner: "Listen and say this sentence the same way I did, but wait 'til I stop talking. Say..."

4 year:	I like to eat red apples.	Pass_____Fail_____

(On the following sentence, pass a one or two word substitution or omission:)

5 year:	Tommy went to the store to get food for his cat.	Pass_____Fail_____
6 year:	Sentences 1 and 2, plus Mrs. Jones asked John to bring home some bread and butter.	Pass_____Fail_____

4. Articulation

Administered only if child's intelligibility is fair or poor. Pictures may be used if helpful. Record correct/incorrect production for the underlined sound.

Note: This subsection should not be used in scoring for high risk if it is the only subtest failed. If a child fails this subtest, a DASE or other articulation measure should be used to determine his/her level and for confirmation of a possible problem.

Examiner: "I'm going to say some words. You say them just as I do."

4 year: k ite g oat r abbit Pass_____Fail_____
5 year: all of the above, plus
s ocks sh oes ch urch Pass_____Fail_____
6 year: all of the above, plus
z oo th umb j ar Pass_____Fail_____

5. Sound Discrimination

Note: Before administering this subtest, teach the child the concept of "same" by saying: "Listen I'm going to say two words: girl-girl, and they are the same words. They are just the same, aren't they? Now if I say chair-wear, these are not the same words. We sit on a chair and we wear clothes. Even though they rhyme they are not the same word. Now, are the words block and rock the same or not the same?" If the child answers correctly proceed with the following. If the child has difficulty with the concept same, substitute the word "different" for "not the same."

"Now, I want you to tell me if these words sound the same or not the same."

share-chair	same	not the same
weed-read	same	not the same
sell-shell	same	not the same
two-two	same	not the same
sick-thick	same	not the same
son-son	same	not the same
mouse-mouse	same	not the same
pat-fat	same	not the same

Pass_____Fail_____

4 year: may miss two
5 year: may miss one
6 year: may miss one

6. Rotations and Reversals of Letters and Numbers

Note: To be administered only if child has completed Kindergarten.

Examiner: "Please write these words in little letters (not capitals)."

boy, girl, moon, no, good, saw, pop

"Now write these numbers."

16, 85, 92, 37, 45

If the child cannot spell, ask him/her to print the following:

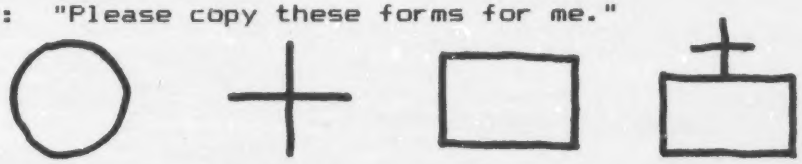
b, g, m, n, o, d, p

Scoring: Post-Kindergarten:
two reversals permitted. Pass_____Fail_____
Mid-first grade:
no reversals permitted. Pass_____Fail_____

7. Copying Forms

NOTE: To be administered to four-year olds or those children who have not completed Kindergarten regardless of age.

Examiner: "Please copy these forms for me."



Criteria for scoring:

Circle: Pass any enclosed form resembling a circle.
Fail continuous round motion.
Plus: Pass any crossing lines.
Square: Pass a closed figure having at least three angles that are near 90 degrees.

Scoring: 4 year: Should copy one of four Pass_____Fail_____
5 year: Should copy two of four Pass_____Fail_____
6 year: Should copy three of four Pass_____Fail_____

8. Following Instructions and Understanding Prepositions

NOTE: Place two blocks on the table.

Examiner: "Listen and do what I ask you to."

1. "Give the block to me and then sit down (or stand up)."
2. "Walk to the door, touch your nose and then sit down."

Give the child the second block, and say:

3. "Put the block on top of the table." "Now put the block under the table."

Scoring:			
	4 year: Should pass #1	Pass_____	Fail_____
	5 year: Should pass #2	Pass_____	Fail_____
	6 year: Should pass #2	Pass_____	Fail_____
	All age groups should pass #3	Pass_____	Fail_____

Subtests below age level_____

High Risk_____Pass_____

Comments: